NATURE LORE BOOKLET

OF

QUESTIONS and ANSWERS

AS SELECTED FROM

PROF. MANTER'S NATURE LORE PROGRAM

BROADCAST THROUGH

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EXTENSION SERVICE
CONNECTICUT AGRICULTURAL COLLEGE

USEFUL BOOKS FOR NATURE-LORE STUDENTS

Name of Book	Author	Publisher
"Field Book of American Wild Flowers"	Mathews	Putnams
"How to Know the Wild Flowers"	Parsons	Scribner
"Field Book of American Trees and Shrubs	Mathews	Putnam
"Pocket Flower Guide of Eastern U. S."	Reed	Doubleday, Page & Company
"Trees in Winter"	Blakeslee & Jarvis	Macmillan
"Handbook of the Trees of New England	Dame & Brooks	Ginn
"Field Book of Common Ferns"	Durand	Putnam
"The Book of Bird Life"	Allen	Van Nostrand
"Handbook of Birds of Eastern North America"	Chapman	Appletons
"Pocket Guide to Land Birds"	Reed	Doubleday, Page & Company
"Guide to the Birds of New England and New York"	Hoffman	Houghton, Mifflin Company
"How to Study Birds"	Job	Macmillan
"Field Book of Wild Birds and their Music"	Mathews	Putnam
"Field Book of American Insects"	Lutz	Putnam
"How to Know the Butterflies"	Comstock	Comstock
"Butterflies"	Weed	Nelson Doubleday
"The Spider Book"	Comstock	Doubleday, Page & Company
"American Animals"	Stone & Cram	Doubleday, Page & Company
"Field Book of North American Mammals"	Anthony	Putnam
"A Field Book of the Stars"	Olcott	Putnam
"Field Book of Common Rocks and Minerals"	Loomis	Putnam
"Handbook of Nature Study"	Comstock	Comstock
"Field Book of Nature Study"	Palmer	Comstock

NATURE STUDY

The trees and the skies and the lanes and the brooks
Are more full of wonders than all of the books
And always out-doors you can find something new;
You never are lacking for something to do;
You never hurt others, or get in the road
In taking the pleasures by nature bestowed;
For there's room on the shore where the great tides roll,
And freedom and peace that are good for your soul;
There's hardly a way you can have so much fun
As in being out-doors with the brooks as they run,
With the birds as they fly, and the stars as they shine,
With the drift of the years as they rise and decline.
It doesn't cost much and it doesn't take long
To get your ear tuned to the mighty world's song.
It brings in its train no unpleasant regrets,
And the farther you go, the better it gets.
So, come where the wild things are waiting outside
And let your soul taste of the joys that abide.

--James G. Needham

The ideals and purpose of the Nature Lore Program are so well expressed by the thoughts in "Nature Study" that we are pleased that Professor Needham permitted its use here.

16. What is the name of the winter bird which is dark colored, slate gray above with a white belly, and outer tail feathers white?

17. Do you know the name of the state flower of Connecticut?

18. Do racoons always wash their food before eating?

19. Why does a partridge or grouse make a somewhat different footprint in the winter time than in summer?

20. Do you know the name of the bird that was to be seen in Washington's time in very large flocks, but since has become extinct?

21. What is the oldest living thing in the world?

22. Do you know why the snow creaks on cold days, but is quiet when the temperature is warmer?

23. What is the name of the caterpillar which is furry, reddish-brown in the middle and black at either end?

24. Why are perching birds so secure from falling even when asleep?

25. What is the name of the bird that is the first to nest in the spring?

26. What is the name of the insect that was responsible for the greatly reduced wheat crop described by Washington in his journals of his journeys through Connecticut?

27. What animal, other than the birds and insects, can fly?

28. What is the name of the tree which has long seed capsules about a foot or more in length? This tree is not common in New England, but is planted for ornamental purposes.

29. Can you drown an insect by holding its head under water?

30. What is the next to the smallest bird common in Connecticut?

31. What is the earliest flower to bloom directly from the ground?

32. What is the name of the tree which grows its seeds in pods like vetch? This tree has a rough bark, grows to a good height, but is not common in Connecticut.

33. What is the name of the animal which is a four-legged spotted creature with a tail; a body about three inches long, and the same general shape as the alligator?

34. How do water birds keep warm when swimming and diving in very cold water?

35. How do mosquitoes get into houses during the winter?

36. Which group of oak trees (black oak group or white oak) has acorns on the trees in winter?

37. What kind of a plant is represented on the Connecticut State Seal?

38. How do beavers, working under the surface, prevent water from entering the mouth?

39. What is the name of the butterfly that normally appears first in the spring?

40. What is the name of the early spring bird which is about 12 inches long, brown in general color, with a black crescent across the breast, a scarlet band on the back of the neck, and with conspicuous black dots beneath?

41. How do flickers capture ants?

42. What are annual, biennial, and perennial plants?

43. What variety of tree, formerly very common in Connecticut, has been almost entirely killed off during the past generation, and what was the cause of this catastrophe?

44. What is a lichen?

45. What state in the Union is the leading fur producer?

46. What causes Mexican jumping beans to jump?

47. Why does a bird lift its head so often while drinking?

48. What is a hair snake?

49. Why is an eel classified as a fish?

50. Why are whales not classified as fish?

51. What constitutes the food of humming birds?

52. Can woodchucks climb trees?

53. How do tree toads or frogs climb trees?

54. What makes the circular cleared basins to be found on the bottom in shallow water?

55. What is a sugar bush?

56. Which returns first in the spring, the male or female red-winged blackbird?

57. If you drive a nail into a tree five feet from the ground, how high will the nail be ten years later, if the tree has added fifteen feet to its height during those ten years?

58. How do snakes move?

59. How can snakes swallow prey larger around than themselves?

60. How do chimney swifts fasten their nests to chimneys?

61. What animal kills the greatest number of song birds?

62. Can the same honeybee sting more than once?

NATURE LORE ANSWERS

1. The color of the berries of the poison sumac is whitish. They are rather attractive looking and sometimes are gathered in the fall by folks who are not acquainted with this poisonous shrub.

2. The white pine is the only common pine tree which has its needles in groups of five. The other pines have clusters of two or three needles.

3. The bird described is the white-breasted nut-hatch, one of our common winter birds.

4. The bird described is the brown creeper, a winter visitor which is not often seen.

5. The most logical explanation of why an ostrich sticks its head into the sand which I have seen given is that it has developed this habit from having lived in dry sandy countries where it was necessary to seek for water beneath the surface of the sand.

6. The deciduous trees which I have noticed holding some of their leaves during the winter are the oaks and the beech. The last of their leaves do not fall until spring.

7. The larch has needles and cones like the evergreen trees and therefore is a coniferous tree, but it sheds its leaves in the autumn and remains bare throughout the winter.

8. The tongue of the toad is attached to the mouth at its front or anterior end. It might be said to be hinged at that point. This curious arrangement allows it to shoot out of the mouth with great rapidity, and to reach out a greater distance to capture its prey of insects..

9. Oval eggs fit together more closely, take up less room in the nest, and there is less chance of their rolling away and being broken.

10. Ernest Thompson Seton wrote "Wild Animals I Have Known".

11. The woodchuck passes the winter hibernating in his den which is dug in the ground.

12. The nuthatch can climb down a tree head first. This is quite an unusual feat, as most birds when they travel down the bark of a tree have to go backwards or tail first.

13. The hind legs of a rabbit over-reach the front legs, so that they touch the ground in front, leaving tracks wider apart than those made by the smaller and shorter fore-feet.

14. The promethe caterpillar spins its cocoon within a leaf while it is green, but before finishing its winter home it ties the leaf and its petiole to the branch by spinning threads of silk so the cocoon cannot fall as it is securely fastened to the tree.

15. The grebe is one bird that rarely is able to take flight except from the water. It is quite helpless on land as its peculiar legs are fitted for swimming but not for walking.

16. The junco is a common winter visitor, dressed in slate-gray and white and sometimes showing its outer white tail feathers.

17. The mountain laurel is the state flower of Connecticut.

18. Racoons do not always wash their food before eating. They do prefer to do this especially with meat, but much of their food may be found away from water. A coon in a corn field stripping the ears would not be likely to find water handy.

19. With the coming of cold weather peculiar horny points grow on the toes of grouse forming fringes which serve as snowshoes to aid the bird in walking on soft snow.

20. The passenger pigeon probably has become extinct. Early in the last century this bird was extremely abundant, migrating in flocks so large as to dim the light of the sun. Thousands of barrels of these pigeons were sold in the market for pot pies.

21. The Sequoia trees of California are thought to be the oldest living things on earth, probably close to 4,000 years old.

22. When it is too cold for the snow to melt under the pressure of the feet, the dry crystals slip over one another thus causing the creaking sound. At warmer temperatures some of the snow melts under the pressure and so no sound is produced.

23. The banded wooly bear caterpillar is brown with black bands at either end. This is the caterpillar that may be seen hurrying along the ground so late in the fall and again in the early spring.

24. In the legs there are tendons that pass over the leg joints to the claws. When birds squat down on their perches the bending of the legs pull the tendons which close the claws tightly around the perch so that they are clamped there until the birds stand again.

25. The great horned owl lays its eggs during the last of February.

26. Washington described in his diaries the poor condition of the wheat crop which he found in New York and Connecticut, and which was attributed to the work of the Hessian fly. This insect has continued to be a destructive pest and now destroys millions of dollars worth of wheat each year in the grain sections of the country.

27. Bats are wonderfully expert fliers. Flying fish and flying squirrels do not really fly but they do glide.

28. The catalpa tree has long seed capsules that hang like long bean-pods.

29. Insects do not possess nostrils on the head, and cannot breathe through the mouth, nor through any part of the head and therefore they would not drown if their heads were held beneath the water. Insects do breathe through tiny openings or breathing pores (spiracles) located along both sides of the body.

30. Next to the ruby-throated humming bird our smallest common bird in this vicinity is the golden-crowned kinglet. The winter wren and the short-billed marsh wren are slightly smaller but not so often seen in Northern Connecticut.

31. The skunk cabbage is one of the earliest flowers to bloom in the spring. It has a brightly colored flower which, however, is quite well hidden and not as attractive as it might be because of its odor.

32. The tree described is the black locust, a valuable tree in certain parts of the country which has been planted somewhat in Connecticut.

33. The salamander is the animal described. It is usually called a lizard, but this is incorrect as true lizards are covered with scales like their relatives the snakes. There are no lizards in this part of Connecticut.

34. Water birds have thick down feathers which are impervious to water and are made more so by the oil of which the birds have abundant supplies. The birds know how to use this oil from their oil glands to water-proof their feathers. The body temperature of birds is very high.

35. Some kinds of mosquitoes hibernate through the winter as adults, normally hiding in some protected place out-of-doors, but some may find their way into cellars and then of course it is not difficult for them to reach the rooms above.

36. The acorns of black, red, and scarlet oaks require two years to grow therefore they may be found partially grown on the trees during the winter.

37. There are three grapevines bearing fruit on the State Seal.

38. The lips of the beaver are so arranged that they close in back of the long teeth (incisors) used for holding objects. The ears and nostrils also are furnished with valves which keep out the water.

39. The mourning cloak butterfly is one of the very earliest good sized butterflies to appear in the spring. It hibernates as an adult and so needs only a few warm days to bring it forth into activity.

40. The bird described is the flicker, also called the golden-winged woodpecker and many other local names.

41. Flickers capture ants and other small insects with their tongues. The tongue of the flicker is unusual. It is long and can be extended two or

three inches beyond the tip of the beak, is supplied with small barbs at the end and is covered with sticky saliva. This arrangement makes an ideal trap for catching the ants which make up a large part of the food of the flicker.

42. An annual plant is one which grows to maturity, produces seeds, and dies within one year.

A biennial plant is one which requires 2 years to complete its life cycle, blossoming and fruiting usually the second year.

A perennial plant is one which lives more than two years and normally does not die after its first flowering period.

43. The mature chestnut tree has almost disappeared from Connecticut, being killed by the disease known as the chestnut blight. This disease which is caused by a fungus is very "catching" and has spread and killed most of the chestnut trees in the country.

44. A lichen is a partnership of two different kinds of plants, a fungus and an alga living together probably for mutual benefit. Lichens grow on rocks, soil, stumps, and logs in various shapes, colors, and sizes.

45. Louisiana is the leading fur producing state. The abundance of muskrats in that state accounts for high valuation of her furs.

46. The movement of small caterpillars inside of Mexican jumping beans cause them to move in an erratic and mysterious fashion. These caterpillars live inside of the beans until they are full grown, when they emerge as small moths.

47. Birds lack certain muscles in the throat for swallowing which we possess and their beak and tongue are not adapted for drinking in the same way as we do. By lifting the head the water runs down the throat.

48. A hair snake is not a hair, neither is it a snake. It is a worm, but only distantly related to the earth worm. Its eggs are laid in water and that is why hair worms are found in watering troughs, wells, and other bodies of water. After hatching it lives as a parasite within the bodies of insects.

49. Fish are classified as cold blooded aquatic animals, breathing by means of gills, and possessing scales. Eels possess these characteristics and so are classified as fish although their scales are imbedded within their skins and are not noticeable.

50. Whales are not classified as fish because they are not cold blooded, do not breathe through gills, and do not possess scales. Whales, together with horses, cows, and others, are classified as mammals because they are warm blooded, possess teeth, hair, lungs, and mammary glands.

51. Humming birds eat many tiny insects which they catch about flowers, as well as the nectar they drink there and the sap from trees.

52. It isn't customary for woodchucks to leave the ground, but when the necessity arises they show that they can make good use of their claws for climbing. Many reliable observers have seen woodchucks in the act of climbing.

53. The feet of tree frogs are supplied with adhesive discs which secrete a sort of liquid glue. These act like suction cups and that is the reason why they can climb such smooth vertical surfaces.

54. Fish such as sun fish, cat fish, and bass clear rocks, sticks, and larger pebbles from circular areas on which to lay their eggs. These basins are really nests where the male fish stand guard to drive away enemies.

55. In parts of Vermont and New Hampshire a grove of sugar maple trees where maple sap is gathered and boiled down into maple syrup and sugar is called a sugar bush. In other sections this is known as a sap orchard.

56. The father red-winged black bird returns first from the south in the spring, which allows him time to look about and select a homesite to have ready when the female bird arrives two or three weeks later.

57. A tree grows in height from its top. The ends of branches grow outward, and the diameters of the trunk and branches increase by adding on layers of new growth and then, of course, the roots grow also. But any spot on the tree trunk does not change materially its distance from the ground. The nail will remain five feet from the ground.

58. The many ribs of snakes are fastened to broad special scales beneath the body. These scales are free of attachment along their rear edges. The movement of the ribs, forward and backward, produce a similar movement of the free edges of the scales, which in turn give the snake motion. They might be thought of as walking on the ends of their ribs.

59. The two jaws of the snake are not hinged together like those of most animals, but to a third bone, called the quadrate, which allows them to separate, thus opening the mouth wider than usual. Snakes may swallow toads, fish, and other prey much greater in girth than their own bodies. After such a meal, its location can be noticed by a bulge somewhere along the snake's body.

60. The nests of chimney swifts are built of twigs forming saucer-shaped shelves on platforms against the inside of chimneys. The saliva of the bird is used as a glue to fasten the nest in place.

61. I believe the cat is the greatest enemy of song birds. This animal inherits from its ancestors the preying instinct and domestication has not changed this very much. Hungry cats catch birds for food, and well fed cats kill birds because of their hunting instinct.

62. The same honey-bee does not usually sting more than once. The reason for this is that in the act of stinging the sting of the bee remains in the wound, since it is provided with barbs that prevent its being drawn out. The bee has only one sting and when this is pulled from its body the resulting mutilation causes the death of the bee.

"May nature be kind to you."

BIRD CALENDAR

Date	Name of bird		Date first seen	Name of bird
	Purple Grackle	1		
	Red-winged Blackbird	2		
	Robin	3		
	Bluebird	4		
	Meadowlark	5		
	Song Sparrow	6		
	Phoebe	7		
	Flicker	8		
	Cowbird	9		
	Fox Sparrow	10		
	Killdeer	11		
	Kingfisher	12		
Apr. 1 - 15	Field Sparrow	13		
	Purple Finch	14		
	Vesper Sparrow	15		
	Myrtle Warbler	16		
	Tree Swallow	17		
	Chipping Sparrow	18		
Apr. 15-30	Chewink	19		
	Hermit Thrush	20		
	Barn Swallow	21		
	Ruby-crowned-Kinglet	22		
	White-throated Sparrow	23		
	Chimney Swift	24		
	Wood Thrush	25		
May 1 - 10	Catbird	26		
	Bobolink	27		